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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,311	11/20/2003	Knut Meyer	BC1015 US DIV	9767
23906 7590 05/17/2007 E I DU PONT DE NEMOURS AND COMPANY LEGAL PATENT RECORDS CENTER BARLEY MILL PLAZA 25/1128 4417 LANCASTER PIKE WILMINGTON, DE 19805			EXAMINER BAUM, STUART F	
			ART UNIT 1638	PAPER NUMBER
			MAIL DATE 05/17/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/718,311

Applicant(s)

MEYER ET AL.

Examiner

Stuart F. Baum

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11,13,14,16,17 and 19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11,13 and 14 is/are allowed.
- 6) ☒ Claim(s) 16-17, 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. The amendment filed 12/7/2006 has been entered.
2. Claims 11, 13-14, 16-17, and 19, including SEQ ID NO:8, 15, 7 and 16 are pending and are examined in the present office action.

Claims 1-10, 12, 15, and 18 have been canceled.

3. Rejections and objections not set forth below are withdrawn.
4. The text of those sections of Title 35, U.S. Code not included in this office action can be found in a prior office action.

### ***Claim Rejections - 35 USC § 103***

5. Claim 16 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Heide et al (1995, German Patent Number DE 44 23 022 C1, USPTO English translation) in light of Pichersky et al (1993, PNAS 83(11):3880-3884). This rejection is maintained for the reasons of record set forth in the Official action mailed 8/1/2006. Applicant's arguments filed 12/7/2006 have been fully considered but they are not persuasive.

Applicants contend Pichersky et al do not teach SEQ ID NO:15 and the difference is not an annotation error (page 8 of Response, 3<sup>rd</sup> paragraph). Applicants contend Pichersky et al discloses four transit peptides from three different tomato ribulose-1,5-bisphosphate carboxylase subunits and one tobacco ribulose-1,5-bisphosphate carboxylase subunit. Applicants contend that none of the disclosed sequences match SEQ ID NO:15 transit peptide sequence which includes a transit peptide donor sequence (page 8 of Response, 4<sup>th</sup> paragraph). Applicants present an alignment comprising the three transit peptides from each of the three tomato ribulose-1,5-bisphosphate carboxylase subunits and SEQ ID NO:15. Applicants have

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highlighted the transit peptide donor sequence, which comprises five amino acids, one of which is a histidine, which does not appear in any of the three peptide sequences from tomato (page 9 of Response, 1<sup>st</sup> full paragraph and inserted alignment).

The Office contends that the transit peptide comprising the inserted histidine does not produce an unexpected result when said transit peptide is operably linked to *any* CPL protein. Given the lack of an unexpected result of using the transit peptide with the added histidine residue, it would have been obvious to one of ordinary skill in the art to use any ribulose-1,5-bisphosphate carboxylase subunit transit peptide to target *any* CPL to the chloroplast. Also, see *In re Kuhle*, 188 USPQ 7, (CCPA 1975), which teaches that a feature which solves no stated problem and which presents no unexpected results would have been an obvious matter of choice. Therefore, an isolated nucleic acid fragment encoding a chimeric protein comprising SEQ ID NO:15 fused to the N-terminus of *any* mature CPL protein would have been *prima facie* obvious as a whole to one of ordinary skill in the art at the time it was made, especially in the absence of evidence to the contrary.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claim 19 claims is directed to non-statutory subject matter. This rejection is made because the claim is drawn to “a nucleic acid fragment” which does not indicate that the “hand of man” was involved in the invention. Amending the claim to recite “isolated” will obviate the rejection.

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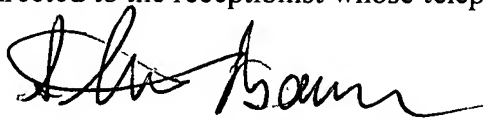
7. Claims 11, 13-14, 17 and 19 are deemed free of the prior art, given the failure of the prior art to teach or reasonably suggest a chorismate pyruvate lyase expression cassette comprising a chimeric gene comprising a nucleic acid molecule encoding a ribulose-1,5-bisphosphate carboxylase small subunit chloroplast targeting sequence operably linked to a nucleic acid molecule encoding a chorismate pyruvate lyase enzyme of SEQ ID NO:8, or plant comprising said cassette, or an isolated nucleic acid comprising SEQ ID NO:15 operably linked to SEQ ID NO:7.

8. Claims 11 and 13-14 are allowable.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stuart F. Baum whose telephone number is 571-272-0792. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached at 571-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.



Stuart F. Baum Ph.D.  
Primary Examiner  
Art Unit 1638  
May 7, 2007

STUART F BAUM, PH.D.  
PRIMARY EXAMINER